Proposal Title	Organization	PI	Email	PM Mentor	Office
Underwater Polarization Navigation Based on Chip-integrated Full-stokes Polarization Imaging System	Arizona State University	Yu Yao	yuyao@asu.edu	Lori Adornato	BTO
Electromagnetically Regulated Cellular Medicines	SRI International	Parijat Bhatnagar	parijat.bhatnagar@sri.com	Eric Van Gieson	BTO
Strategic Design and Development of a Plant Bio-mining System to Sustainably Harvest Rare Earth Elements from Domestic U.S. Sources	North Carolina State University	Colleen Doherty	cjdohert@ncsu.edu	Blake Bextine	BTO
Covalent Modulators of Proteostasis	University of California, Los Angeles	Keriann Backus	kbackus@mednet.ucla.edu	Tristan McClure-Begley	BTO
Quantum Concepts in Classical Optics	University of Rochester	Nick Vamivakas	nick.vamivakas@rochester.edu	Michael Fiddy	DSO
Quantum Reservoir Engineering Inspired Classical Optical Technology	Tulane University	Denys Bondar	dbondar@tulane.edu	Michael Fiddy	DSO
Smart City Threat Detection Using Integrated Chemical Sensing and Machine Learning	University of Utah	Pierre-Emmanuel Gaillardon	pierre-emmanuel.gaillardon@utah.edu	Vincent Tang	DSO
Ant Colonies as an Animal Model to Understand the Economic, Environmental and Conflictive Drivers of Mass Migrations	New Jersey Institute of Technology (NJIT)	Simon Garnier	garnier@njit.edu	Jonathan Pfautz	I20
Transferable Factors of Updating Behavior for Predicting Vulnerability of Patching and Exploitation	University of Maryland	Tudor Dumitras	tdumitra@umiacs.umd.edu	Joshua Baron	I20
Hybrid Intelligent Agents for Deploying Robust AI Systems	University of Michigan	Walter Lasecki	wlasecki@umich.edu	Joshua Elliott	I20
Digital Techniques for Exposing and Eliminating Information Hidden in SRAM's Analog Domain	Virginia Polytechnic Institute and State University	Matthew Hicks	mdhicks2@vt.edu	Jonathan M. Smith	I20

SmartScript: A Learning-based Approach to Static Type and Semantic Inconsistency Analysis of Dynamic Scripts (and Other Semi-Structured Code)	Texas A&M Engineering Experiment Station	Jeff Huang	jeff@cse.tamu.edu	Jacob Torrey	I20
A Principled Approach to Identifying Cellular Network Attacks	University of Iowa	Omar Haider Chowdhury	omar-chowdhury@uiowa.edu	Raymond Richards	I20
Ferroelectrically Transduced Ge Nano-Fin Bulk Acoustic Resonators for Chip-Scale Instinctually Adaptive RF Spectral Processing	University of Florida	Roozbeh Tabrizian	rtabrizian@ufl.edu	Timothy Hancock	MTO
Fully-Integrated Tunable N-Path Frequency-Selective Limiters for Self-Adaptive Interference Suppression	University of California Santa Barbara	Loai Salem	salem@ece.ucsb.edu	Timothy Hancock	MTO
A General and Ultra high-performance Platform for Nonlinear Photonics	Stanford University	Amir Safavi-Naeini	safavi@stanford.edu	Gordon Keeler	MTO
Visible and Mid-infrared Frequency Comb Generation in Wide-bandgap Photonic Materials	Carnegie Mellon University	Qian Li	qingli2@andrew.cmu.edu	Gordon Keeler	MTO
Additive Manufacturing (AM) of Highly Responsive Piezoelectric Materials with 3D Addressable Electrode Interfaces and Strain Amplifications	University of California, Los Angeles	Xiaoyu (Rayne) Zheng	Rayne@seas.ucla.edu	Ronald Polcawich	MTO
Additive Manufacturing of Functional Hierarchical Shape Memory Alloys	Pennsylvania State University	Reginald F. Hamilton	rfhamilton@psu.edu	Ronald Polcawich	MTO
Additive Manufacturing for High-Energy-and-Power Multi-Functional 3D Batteries	University of Washington	Corie Cobb	clcobb@uw.edu	William Carter	DSO
Mismatched Epitaxy of Infrared Device Materials Using Graphene-mediated Lateral Overgrowth	University of Wisconsin Madison	Jason Kawasaki	jkawasaki@wisc.edu	Whitney Mason	MTO

Dislocation-free Heteroepitaxy of IR Devices by Remote Epitaxy	Massachusetts Institute of Technology	Jeehwan Kim	jeehwan@mit.edu	Whitney Mason	MTO
Metamaterial Integrated Ultra-Broadband Antenna Array with Embedded Reconfigurable Non-Foster Circuits	Rutgers University	Chung-Tse Michael Wu	ctm.wu@rutgers.edu	Young-Kai Chen	MTO
A Machine Learning Approach to Automated Non Foster Circuit Synthesis	University of Idaho	Ting-Yen Shih	tshih@uidaho.edu	Neil Fox	STO
Silicon Photonics enabled Reconfigurable Optical Analog Processor	University of Idaho	Vishal Saxena	vsaxena@uidaho.edu	Vincent Urick	STO
Minimum L1 Norm Specialist Networks for Learning Sparse Active Pathways	University Central Florida	Abhijit Mahalanobis	Amahalan@crcv.ucf.edu	Jiangying Zhou	STO
Rapid and Robust Processing in Spatially-multiplexed Optical Systems: Leveraging Lattice Defects for Pyramid Learning	University of California, Riverside	Luat Vuong	LuatV@UCR.edu	Jiangying Zhou	STO
Rationally Inattentive Predictive Vision via Directed Information Regularization	University of Texas at Austin	Takashi Tanaka	ttanaka@utexas.edu	Jiangying Zhou	STO
A Variable and Multi-fractional Order Computational Mechanics Framework: Simulation, Optimization, and Monitoring of Hypersonic Structures in a Multi-physics Environment.	Purdue University	Fabio Semperlotti	fsemperl@purdue.edu	Chris Clay	TTO
Environment Informed Vibration Based Health Monitoring Technique	Florida State University	Kourosh Shoele	kshoele@fsu.edu	Chris Clay	TTO
Time-expanded Space Logistics Network Modeling and Optimization for On-orbit Servicing, Assembly, and Manufacturing	GA TECH Research Center	Koki Ho	kokiho@gatech.edu	Joseph Parrish	TTO